THE STATISTICAL DEBATE ABOUT THE FUTURE OF WAR: BIBLIOGRAPHICAL ESSAY

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Steven Pinker, *Îngerii mai buni ai naturii noastre. De ce s-a diminuat violența* [*The Better Angels of our Nature*], Publica Publishinghouse, 2019 [2011], p. 888.

Bear F. Braumoeller, *Only The Dead: The Persistence of War in The Modern Age*, Oxford University Press, 2019, p. 314.

Nils Petter Gledish (coord.). 2020. *Lewis Fry Richardson. His Intellectual Legacy and Influence in the Social Sciences*. Heidelberg: Springer, p. 156.[1]

The attributes of warfare and the future of conflict gained the public's attention with the famous work by Steven Pinker, *The Better Angels of our Nature*, translated in Romanian a few years ago. The author argued from a statistical perspective that we are living in the most peaceful period in history, at least considering the last hundreds of years, or more precisely that the threats against the life of an average citizen have fallen to a minimum, including domestic violence, war, criminality, the punishments, etc. (Pinker 2019, 14-21). His ideas raised many critiques and praises, which inspired in part the arguments of Braumoeller, in *Only the Dead*, and from the volume edited by Nils Petter Gledish. The theme is significant in itself, since the causes of war and of its attributes are still scientific puzzles, but also in the context of Great Power politics apparent renewal, as exemplified by the Russian in Ukraine since 2014 or in Taiwan.

Firstly, some clarifications are necessary. This debate is not about practical issues such as the operational dimensions of war, hybrid warfare and other similar

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[1] The text is inspired by the impressive syllabus made by Jack Levy for the course on theories of war, which can be found here: http://home.uchicago.edu/~mjreese/CurrentStudents/LevyPOLSGR8832.pdf

topics, and cannot be dismissed by one or two counterexamples. The participants are interested in investigating a few attributes which are important for explaining this phenomenon, among them occurrence, frequency, probability or costs defined in terms of battle deaths (Geller and Singer 1998). Since the perspective is inductive and statistical, the theoretical aspect is very dim and the focus is on general findings about the war.

Now, for Pinker, the world gets better, but the pathways are fuzzy. I should underline that the main standard of evaluation is the risk that an average person may fall victim to physical aggression, be it war or crime. This somehow surprising conclusion is the result of different tendencies, some being thousands of years old: the formation of states; processes of political centralization; the Enlightenment; the peace between the Great Powers in the last decades; a reduction in the severity of war since 1990, and the growing value of human rights (Pinker 2019, 14-21). The main point of controversy for me is the interpretation of interstate and Great Power war and his preferred criterion of risk, defined as the relative measure of battle deaths compared to world population.

The author underlined some limits of his thesis. Most importantly, the projection is uncertain and one cannot guarantee that this trend of peacefulness will continue, since we may live in the interval between two great conflicts, as some critics have pointed out, while the power law may fool us (Talbot 2018; Clauset 2020). From these critics, Talbot is the most notorious, while Clauset uses an interesting statistical analysis, reprinted in the volume edited by Nils Petter Gledish. Furthermore, a measure of intellectual prudence comes from two other points, stressed by Braumoeller: any conflict may escalate to the level of a major war, and the trends are concentrated in the Western democracies (Braumoeller 2019). Even taking into account these objections, the debate is important, since it may imply, for countries such as Romania, a reduction in costs, maybe also in the frequency of security threats of a violent nature (war, terrorism, criminality, etc.) and the issue of whether the change will continue.

Pinker relies on a body of research initiated by Lewis Fry Richardson, who identified two main attributes of wars, occurrence and severity (Geller and Singer 1998, 27-28; Pinker 2019, 236). Thus, the onset of war follows a Poisson distribution, meaning it is a rare phenomenon (Richardson 1944). But judging the relationship between frequency and severity, defined in absolute terms, the researcher noticed that the trend is of a power law distribution, in which just a few events are dominating the majority of occurrences (Clauset 2020, 116; Spagat and Weezel 2020, 131-132). The phenomena are considered independent and possessing equal probability; these two main characteristics were found many times, even with new data (*ibidem*).

The idea of rarity requires some clarification. It is a conclusion based on historical statistics and on the Poisson distribution: if one assumes no significant

change after 1945 or 1953, and takes into account the historical frequency of 0.67 yearly conflicts, then the probability of a new war in the next year is of 30%; the probability of two new wars is 11%; of three, 0.025% and of four, 0.043% (Geller and Singer 1998, 1; Winner 2015). A similar relationship holds in cases of terrorist attacks, the proportion of rich people in modern societies, or car crashes (MacLean and Teale 1982-1983; Clauset 2020, 116; Spagat and Weezel 2020, 131-132). A new war may not change a trend, but two or more occurring in parallel are significant.

Rarity also means that the risk of a conflict is small but it cannot be neglected: this argument is derived from the power law mentioned above, which may cause problems for forecasting, as Taleb famously argued, and it resumes the conventional wisdom (Geller and Singer 1998, 1; Taleb 2018; Pinker 2019, 264-274; Spagat and Weezel 2020, 131; Clauset 2020). Thus, taking into account frequency and impact, major wars are comparable with 7 degrees' earthquakes and other phenomena, which means that the most severe security threats are unlikely to happen but they may occur anytime, following a seemingly random process of escalation (Clauset 2020, 116; Braumoeller 2019). Nassim Taleb considered that forecasting methods based on extrapolation and normal distribution may fail, since it is enough for one big event to happen and the trend apparent is reversed, a common idea in the study of warfare (Taleb 2018; Clauset 2020, 115-166). The classical example is the reduction in severity of European conflicts preceding World War I, and the associated extrapolation which stimulated the "cult of offensive" (Evera 1984; Cirillo and Taleb 2016).

Consequently, many critics have argued that Pinker is wrong. Pasqualle Cirillo and Nassim Nicholas Taleb argued that their data on conflicts do not show a change in the risk of a major war, which remained Black Swans; the probability of a world war being one at 80 years, but their ideas also raised objections (Cirillo and Taleb 2016; Spagat 2017; Taleb 2018). For his part, Bear Braumoeller reasoned that the intensity of war did not change (battle deaths compared to the population of state engaged in conflict, contrary to the world population); neither did the severity (defined as direct battle deaths); the rate of initiation of Militarized Interstate Disputes (violence with losses less than a war) has been reduced since 1990, but inside an overall process of growth in the last two centuries and finally, that while the prevalence of war fell (war compared to population close to Pinker's preferred idea), the power law nature may confuse observers (Braumoeller 2019, 85-87, 106-107, 188-122). Last but not least, Clauset employed a different methodology to make the case that the probability of a major conflict is, on the average, one at each 161 years and we may be inside of this loop, which makes difficult to judge Pinker's thesis, since we do not know whether the change is real (Clauset 2020, 123-125).

The data is ambiguous and the dispute remains unsolved. In the same volume edited by Nils Petter Gledish, Michael Spagat and Stijn van Weezel have shown

that, if we choose a breaking point after 1953, the results are more favorable to Pinker's ideas than if one is starting to count since 1945, but the conclusions are not definitive for them either. (Spagat and Weezel 2020, 138-139). The main concept, the costs of wars, is operationalized in different ways, according to authors' perspective, while an academic consensus is still frail on these issues. For now, the dominant feeling remains the one expressed by Jack Levy, Thomas Walker and Martin Edwards, that, even if the severity of great power war grew, on the long run and by comparison with total population size, their frequency and the severity of all wars fell starting with 1950s; nevertheless, interstate wars are not yet outdated (Levy, Walker, and Edwards 2001, 15-48).

The debate shows that security threats such as war and terrorism are difficult to understand even when data are available. The persistence of these ambiguities suggests that a rigid empirical approach risks offering only incomplete answers or it may reflect researchers' values, but relying on a theoretical perspective may correct some of these, if it is rigorous enough. Two general issues need to be remembered. Is war a homogenous class of events and can be treated as an autonomous variable, or if not, should it be integrated in a bigger category, or broken in smaller conceptual pieces (Vasquez 2009)? The second issue remains the problem of war decline, Pinker's proposal being yet difficult to judge.

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